



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
|-----------------|-------------|----------------------|---------------------|------------------|

09/703,942

10/31/2000

Eric A. Pulsipher

10008102-1

4047

22879

7590

02/23/2005

HEWLETT PACKARD COMPANY
P O BOX 272400, 3404 E. HARMONY ROAD
INTELLECTUAL PROPERTY ADMINISTRATION
FORT COLLINS, CO 80527-2400

EXAMINER

HO, CHUONG T

ART UNIT

PAPER NUMBER

2664

DATE MAILED: 02/23/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/703,942

Applicant(s)

PULSIPHER ET AL.

Examiner

CHUONG T HO

Art Unit

2664

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 13 October 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-3 and 5-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3 and 5-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

Art Unit: 2664

1. The amendment filed 10/13/04 have been entered and made of record.
2. Applicant's amendment filed 10/13/04 with respect to claims 1-20 have been considered but are moot in view of the new ground(s) of rejection.
3. Claims 1-3, 5-20 are pending.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-3, 5-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Liang et al. (U.S. Patent No. 5,732,086) in view of Wood (U.S. Patent No. 6,405,248 B1).

In the claim 1, see figure 3, Liang et al. discloses topology table 26 (tuples) which comprises: node identifier (host identifier), link port (port specification) (see col. 5, lines 7-15, lines 21-25, col. 6, lines 5-9, col. 7, lines 20-23, col. 14-16); comprising:

Creating a plurality of tuples (topology table 26, see figure 3) for a topology of a network, wherein the tuples represent nodal connections of the network and wherein each of the tuples (topology tables 26) comprises a host identifier, a port specification (see col. 5, lines 7-15, lines 21-25, col. 6, lines 5-9, col. 7, lines 20-23, col. 14-16);

receiving new tuples (host identifier, port specification) that represent new nodal connections (see col. 7, lines 20-23);

comparing the list of existing tuples (host identifier, port specification) with the new tuples to identify changes to the topology (see col. 7, lines 20-23).

However, Liang et al. is silent to disclosing tuples comprising interface information.

Wood discloses creating an accurate topology map of a given network by: obtaining a list of managed network device; identifying link port and node port....device interface information (see abstract); comprising:

Each of the tuples (topology map) comprises interface information, a port specification, host identifier (see abstract, table 1, col. 6, lines 10-20).

Liang and Wood are directed to routing packets using IP protocol. Wood recognizes that there may be conflicting source address. Hence, it would have been obvious to use the interface information of Wood in Liang as it would have resolved source address conflicts when routing using the table (tuples) of both Liang and Wood.

5. In the claim 8, see figure 3, Liang et al. discloses topology table 26 (tuples) which comprises: node identifier (host identifier), link port (port sepecification) (see col. 5, lines 7-15, lines 21-25, col. 6, lines 5-9, col. 7, lines 20-23, col. 14-16); comprising:

A topology database that stores an existing topology of a network using tuples (topology table 26, see figure 3) , wherein each tuple includes a host identifier, port specification for a node in the network (see col. 5, lines 7-15, lines 21-25, col. 6, lines 5-9, col. 7, lines 20-23, col. 14-16);

A topology converter connected to the topology database that receives new tuples that represent new nodal connections, and compare the new tuples with the

Art Unit: 2664

existing topology to identify changes in the network by comparing the host identifier, port specification (see col. 7, lines 20-23);

However, Liang et al. is silent to disclosing tuples comprising interface information.

Wood discloses creating an accurate topology map of a given network by: obtaining a list of managed network device; identifying link port and node port....device interface information (see abstract); comprising:

Each of the tuples (topology map) comprises interface information, a port specification, host identifier (see abstract, table 1, col. 6, lines 10-20).

Liang and Wood are directed to routing packets using IP protocol. Wood recognizes that there may be conflicting source address. Hence, it would have been obvious to use the interface information of Wood in Liang as it would have resolved source address conflicts when routing using the table (tuples) of both Liang and Wood.

6. In the claim 15, see figure 3, Liang et al. discloses topology table 26 (tuples) which comprises: node identifier (host identifier), link port (port sepecification) (see col. 5, lines 7-15, lines 21-25, col. 6, lines 5-9, col. 7, lines 20-23, col. 14-16); comprising:

Creating a plurality of tuples (topology table 26, see figure 3) for a topology of a network, wherein the tuples represent nodal connections of the network and wherein each of the tuples (topology tables 26) comprises a host identifier, a port specification (see col. 5, lines 7-15, lines 21-25, col. 6, lines 5-9, col. 7, lines 20-23, col. 14-16);

receiving new tuples (host identifier, port specification) that represent new nodal connections (see col. 7, lines 20-23);

comparing the list of existing tuples (host identifier, port specification) with the new tuples to identify changes to the topology (see col. 7, lines 20-23).

However, Liang et al. is silent to disclosing tuples comprising interface information.

Wood discloses creating an accurate topology map of a given network by: obtaining a list of managed network device; identifying link port and node port....device interface information (see abstract); comprising:

Each of the tuples (topology map) comprises interface information, a port specification, host identifier (see abstract, table 1, col. 6, lines 10-20).

Liang and Wood are directed to routing packets using IP protocol. Wood recognizes that there may be conflicting source address. Hence, it would have been obvious to use the interface information of Wood in Liang as it would have resolved source address conflicts when routing using the table (tuples) of both Liang and Wood.

7. In the claims 2, 10, Liang et al. discloses updating a topology database with a new topology (see col. 7, lines 20-23).

8. In the claim 3, Liang et al. discloses taking action on the changes to the topology (see col. 7, lines 20-23).

9. In the claims 5, 6, 11, 12, 18, Liang et al. discloses the step of comparing comprises identifying duplicate tuples that appear both in the list of existing tuples and in the new tuples, and maintaining a current status of the topology for these tuples (see col. 7, lines 20-23).

10. In the claims 7, 13, 14, 19, Liang et al. discloses the step of comparing comprises searching for a host of a new singly-heard host link tuple or a new multi-heard host link tuple in the list of existing tuples (see col. 7, lines 20-23).

11. In the claim 9, Wood discloses wherein the topology converter creates the tuples for the topology of the network (see abstract, table 1, col. 6, lines 10-20).

12. In the claims 17, 16, 20, Liang et al. discloses wherein the step of comparing comprises identifying duplicate tuples that appear both in the list of existing tuples and in the new tuples, and maintaining a current status of the topology of these tuples (see col. 7, lines 20-23).

13. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Conclusion

Art Unit: 2664

14. Any inquiry concerning this communication or earlier communications from the examiner should be directed to CHUONG T HO whose telephone number is (571) 272-3133. The examiner can normally be reached on 8:00 am to 4:00 pm.

The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

02/16/05

A handwritten signature in black ink, consisting of stylized, overlapping loops and a long horizontal stroke extending to the right.